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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,713	07/06/2004	Johannes J. Meerman	119567	7197

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EXAMINER
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WOLLSCHLAGER, JEFFREY MICHAEL

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/500,713	<b>Applicant(s)</b> MEERMAN ET AL.	
	<b>Examiner</b> Jeff Wollschlager	<b>Art Unit</b> 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/6/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the subject matter of the application admits of illustration by clear and precise drawings to facilitate understanding of the invention. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 9 of U.S. Patent No. 5,945,054 in view of Roberts (U.S. Patent 4,193,962; issued March 18, 1980).

Claim 9 of U.S. Patent 5,945,054 claims a method for manufacturing filaments from an optically anisotropic spinning solution comprising extruding the spinning solution through a spinneret comprising a spinning field with a plurality of spinning orifices into a coagulation bath through a slot/rectangular opening in the bottom of the bath, wherein the edges of the rectangular opening are formed by plates with upper sides and lower sides, wherein the upper sides of the plates have the shortest distance to the spinning field, wherein a projection of the slot intrinsically is about the same size as a projection of the spinning field, and wherein a plane of an upper side of one plate intrinsically has a shorter distance to the center of the spinning field than a plane of an upper side of the other of the plate. Meerman et al. do not teach that a line through the center of the spinning field and perpendicular to the upper sides of the plates is located at a distance (d) from a parallel line through the center of the slot, wherein the line through the center of the spinning field has a smaller distance to the edge of the other of the plates than to an edge of the one of the plates.

However, Roberts teaches an analogous method of spinning wherein for the purpose of reducing vortexing, fused filaments, and spin breaks, he provides an upward shift in the guides/plates so that adjacent edges of adjacent openings are at different levels, like claim 9 of the '054 patent, and further provides a lateral shift of the guides/plates such that a line through the center of the spinning field and perpendicular

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to the upper sides of the plates is located at a distance (d) from a parallel line through the center of the slot, wherein the line through center of the slot has a smaller distance to the edge of the other of the plates than to an edge of the one of the plates (Figure 1; Figure 2 and 4, elements (18, 19, 20, 21, and 22); Abstract; col. 4, lines 5-7; col. 5, lines 1-4 and 30-44).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to combine the teaching of Meerman et al. and Roberts for the purpose, as taught by both Meerman et al. (col. 3, lines 7-17) and Roberts (col. 1, lines 17-32), to reduce vortexing, fused filaments and spin breaks.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because it is unclear whether the recitation "the edges thereof" refers to the edges of the coagulation bath or the edges of the slot or diaphragm. Claim 1 is indefinite because the recitation "a center of the spinning field" makes it unclear whether the claim is directed to the geometric center of the entire spinning field, as is understood for the purposes of examination, or a center of some part of the spinning field. Claim 1 is indefinite because the recitation "a center of the

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slot or diaphragm” makes it unclear whether the claim is directed to the geometric center of the slot or diaphragm, as is understood for the purposes of examination, or a center of some part of the slot or diaphragm. Claim 1 is indefinite because it is unclear how the recitation “upper sides of the plates being defined as having a shortest distance to the spinning field” is intended to limit the claim. It is unclear whether the shortest distance is relative to both lower sides of both plates or whether the upper side of each plate has the shortest distance to the spinning field relative to its own lower side only. Claim 1 is indefinite because the recitation, “wherein a projection of the slot or diaphragm has about a same size and shape as a projection of the spinning field” is unclear as to its limiting effect. It is noted that through “projection” very small items can be made to look large and very large items may be made to look small. As such, it is unclear what limiting effect this recitation has on the claim. Claim 1 is indefinite because the recitation to “other of the plates” and “one of the plates” appears to be intending to limit the claim to dimensions relative to specific plates. However, it is unclear how these recitations limit the claim as currently presented.

Claim 2 is indefinite for the same reasons given for claim 1 above. Additionally, claim 2 recites, “and a line has a smaller distance to an edge of another plate than to an edge of the one plate”. It is unclear what line is being referred to and what the limiting effect of the line is on the claim. For the purposes of examination it is understood that the line is through the center of the spinning field, as recited in claim 1.

Claim 7 is indefinite because it refers to the "projection" of the slot or diaphragm. As noted, very small items can be made to look large, very large items may be made to look small, and dimensions may be distorted through projection.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meerman et al. (U.S. Patent 5,945,054; issued August 31, 1999) in view of Roberts (U.S. Patent 4,193,962; issued March 18, 1980).

Regarding claims 1 and 2, Meerman et al. teach a method and a device for manufacturing filaments from an optically anisotropic spinning solution comprising

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extruding the spinning solution through a spinneret comprising a spinning field with a plurality of spinning orifices into a coagulation bath through a slot, wherein the edges of the slot are formed by plates with upper sides and lower sides, wherein the upper sides of the plates have the shortest distance to the spinning field, wherein a projection of the slot intrinsically is about the same size as a projection of the spinning field, and wherein a plane of an upper side of one plate has a shorter distance to the center of the spinning field than a plane of an upper side of the other of the plate (Abstract; col. 3, lines 13-18; col. 5, lines 3-9; claim 9). Meerman et al. do not teach that a line through the center of the spinning field and perpendicular to the upper sides of the plates is located at a distance (d) from a parallel line through the center of the slot, wherein the line through the center of the spinning field has a smaller distance to the edge of the other of the plates than to an edge of the one of the plates.

However, Roberts teaches an analogous method and device for spinning wherein for the purpose of reducing vortexing, fused filaments, and spin breaks, he provides an upward shift in the guides/plates so that adjacent edges of adjacent openings are at different levels, like Meerman et al., and further provides a lateral shift of the guides/plates such that a line through the center of the spinning field and perpendicular to the upper sides of the plates is located at a distance (d) from a parallel line through the center of the slot, wherein the line through center of the slot has a smaller distance to the edge of the other of the plates than to an edge of the one of the plates (Figure 1; Figure 2 and 4, elements (18, 19, 20, 21, and 22); Abstract; col. 4, lines 5-7; col. 5, lines 1-4 and 30-44).



Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to combine the teaching of Meerman et al. and Roberts for the purpose, as taught by both Meerman et al. (col. 3, lines 7-17) and Roberts (col. 1, lines 17-32), to reduce vortexing, fused filaments and spin breaks.

As to claims 3-6, Meerman et al. exemplify a coagulation bath having a depth of 10 mm and openings/slots of 2 mm x 15 mm (col. 5, lines 3-7). Meerman et al. do not explicitly teach the claimed dimensions. However, it is noted that based on the size of the equipment employed by Meerman et al. and Roberts the dimensions implied by Meerman et al. and Roberts, are implicitly within the claimed ranges.

Further, it is noted that the thickness of the plates and the dimension of the distance (d) would impact the required size of the bath, the physical properties of the spun product and the spinning rate. Further, the thickness of the plates would impact the cost and weight of the plates and the amount of coagulating/quenching fluid to which the spun solution is exposed. As such, the thickness of the plates and the dimension of the distance (d) are result effective variables that would have been readily optimized as is routinely practiced in the art.

As to claim 7, a projection of the slot has a greater length than the projection of the spinning field and is somewhat narrower in width for the reasons given in the 35 U.S.C 112, second paragraph rejection above.

### ***Conclusion***

All claims are rejected.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

Jeff Wollschlager  
Examiner  
Art Unit 1732

August 15, 2006

  
CHRISTINA JOHNSON  
PRIMARY EXAMINER  
8/21/06